

PCT

WORLD INTELLECTUAL PROPERTY  
ORGANIZATION

INTERNATIONAL APPLICATION PUBLISHED UNDER



(51) International Patent Classification<sup>6</sup> :

A01M 23/08, 23/18

A1

(11) L:

WO 9608964A1

(43) International Publication Date:

28 March 1996 (28.03.96)

(21) International Application Number: PCT/BE95/00079

(22) International Filing Date: 6 September 1995 (06.09.95)

(30) Priority Data:  
9400852 21 September 1994 (21.09.94) BE

(71)(72) Applicant and Inventor: REYNDERS, Joannes [BE/BE];  
Grotlaan 33 A, B-3680 Maaseik (BE).

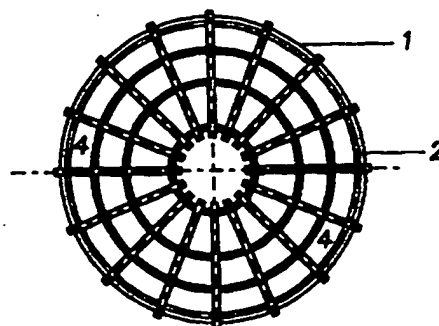
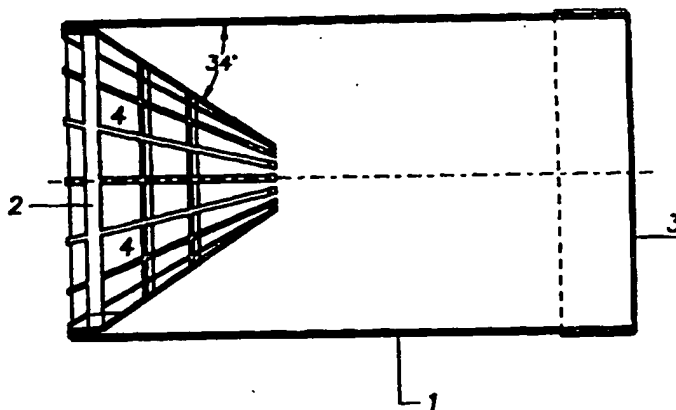
(81) Designated States: AT, CA, CH, CZ, DE, DK, FI, GE, HU, KZ, LU, MN, NO, PL, RU, SE, SK, UA, US, European patent (AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).

Published  
With international search report.

(54) Title: EFFECTIVE, ECONOMICAL, SELECTIVE, SAFER AND ENVIRONMENTALLY FRIENDLY METHOD OF CATCHING MUSKRATS USING PLASTIC TUBE NETS

(57) Abstract

Using tube nets placed in large numbers. The ideal size is 50 cm long and 25 to 30 cm diameter, manufactured from plastic ((1) figure 1). Sealed at the bottom ((3) figure 1) and provided at the top with one or more flaps ((6) figure 2) or throats (funnels) ((2) figure 1). Fitted with escape openings for small animals ((4) figures 1 and 2). The core of the problem is that there is currently no structural and preventive approach, and many unwanted creatures are trapped. Using tube nets placed permanently in large numbers of locations, the muskrats will be trapped while on the move, before they have chance to breed, quickly reducing the population.



BEST AVAILABLE COPY

**FOR THE PURPOSES OF INFORMATION ONLY**

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AT	Austria	GB	United Kingdom	MR	Mauritania
AU	Australia	GE	Georgia	MW	Malawi
BB	Barbados	GN	Guinea	NE	Niger
BE	Belgium	GR	Greece	NL	Netherlands
BF	Burkina Faso	HU	Hungary	NO	Norway
BG	Bulgaria	IE	Ireland	NZ	New Zealand
BJ	Benin	IT	Italy	PL	Poland
BR	Brazil	JP	Japan	PT	Portugal
BY	Belarus	KE	Kenya	RO	Romania
CA	Canada	KG	Kyrgyzstan	RU	Russian Federation
CF	Central African Republic	KP	Democratic People's Republic of Korea	SD	Sudan
CG	Congo	KR	Republic of Korea	SE	Sweden
CH	Switzerland	KZ	Kazakhstan	SI	Slovenia
CI	Côte d'Ivoire	LI	Liechtenstein	SK	Slovakia
CM	Cameroon	LK	Sri Lanka	SN	Senegal
CN	China	LU	Luxembourg	TD	Chad
CS	Czechoslovakia	LV	Latvia	TG	Togo
CZ	Czech Republic	MC	Monaco	TJ	Tajikistan
DE	Germany	MD	Republic of Moldova	TT	Trinidad and Tobago
DK	Denmark	MG	Madagascar	UA	Ukraine
ES	Spain	ML	Mali	US	United States of America
FI	Finland	MN	Mongolia	UZ	Uzbekistan
FR	France			VN	Viet Nam
GA	Gabon				

-1-

EFFECTIVE, ECONOMICAL, SELECTIVE, SAFER AND ENVIRONMENTALLY  
FRIENDLY METHOD OF CATCHING MUSKRATS USING PLASTIC TUBE NETS  
\*\*\*\*\*

For 40 years the muskrat has been fought using traps,  
poison and all manner of nets. With the result that there  
are now more muskrats than ever in Europe - 400,000 per  
year in the Netherlands alone, for example. That figure  
5 could be reduced to 100,000 a year or less if the mesh of  
the net were made smaller.

- The disadvantages of trapping, netting and poisoning are:
- 1) 15% of the animals trapped are not muskrats (mostly  
waterfowl); the figure for poisoning is unknown.
  - 10 2) It is necessary to search out the rats and destroy  
them time and again.
  - 3) It is extremely labour-intensive due to the constant  
need to place and clear material.
  - 4) A lot of material is stolen and/or destroyed.
  - 15 5) It is expensive and has a limited life due to exten-  
sive losses and rusting.
  - 6) A new trapper needs two years to master the skills  
fully.
  - 7) Nets often hinder the water flow and quickly become  
20 clogged by sand and floating debris.
  - 8) Poisons continually enter the environment and are  
consumed by other animals.
  - 9) Great damage is caused to agriculture and dikes.
  - 10) Environmental and nature organisations are totally  
25 opposed to these methods.
  - 11) These methods are not preventive: it is a case of  
constantly trying to keep down the rat population  
after they have bred.
  - 12) Tonnes of heavy metals are released into the atmos-  
30 phere (zinc from the nets due to rusting).
  - 13) The results show that these methods are not effective

In the course of three years I have developed a system  
for reducing and maintaining the muskrat population at a  
very low level. This is achieved by placing tube nets  
35 in large numbers, for example 4.000 in the Belgian pro-  
vince of Limburg (covering 1/9 of Belguim).  
In my area, which covers 1/4 of Limburg, I have cut the  
number of catches in the course of three years from  
around 6.000 to 1.000 per year. I currently have 900 nets  
40 out in my area; this needs to be increased to 1.000 and  
the problem will be solved.

-2-

5 These nets are placed everywhere and stay in position for ever, wherever muskrats are or have been present, including at strategic locations which the rats pass in large numbers during the spring and autumn migrations. This has a preventive effect since the rats are caught before they have a chance to breed, thus leading to a rapid reduction in the rat population. The nets are made from new or recycled plastic.

There are various types, the two most common being:

- 10       1) a throated net (fig.1)  
         2) a net with flap (fig.2)

15 The throated net is the most common, being used in deep water. The nets can be used in a variety of shapes, such as square, oval, hexagonal, etc., though round is the most obvious. Several colours are also available.

The net with a flap is designed for use in shallow water. The throated net is able to expand (the throat (2) fig.1 widens), enabling the rat to enter easily but preventing escape or habituation; thereafter the rats drown.

20 The throat and flap contain escape holes ( (4) fig.1+2 ) for small fry such as crabs, frogs, fish, voles, etc., so that the nets work very selectively. the ends of the nets are sealed by welding or with a cover (fig. 1+2, (3) ).

25 The flap (fig. 2, (6) ) in the flapped nets is hinged (5) this hinge is attached to the net itself or is fixed in some other way. The flap and throat can be made from PVC thread or other material.

30 Alternatively, both systems can be made up as a complete net and pushed into the tube. However, the cheapest, most effective and longest lasting method is to make only the throat and the flap from plastic.

35 The tubes, which are dug transversely into the dike, can be of various shapes and sizes, from 20 cm. to 150 cm. long and from 6 to 70cm in diameter. The ideal size is 50 cm. long and 25 to 30 cm. in diameter. There are various reasons for this: cheap, quick to position, no deep water needed, highly effective, etc.

Using this system it would even be possible to eradicate the muskrat altogether.

40 These throats and flaps can also be used to make normal nets, i.e. without tubes, either wholly or partly from plastic and thread.

-3-

The advantages of these tube nets are:

- 1) No other animals are trapped by mistake.
- 2) They work all year round.
- 3) They are not stolen or destroyed (they are underwater  
5 and underground and thus invisible).
- 4) Once in position, little work is required.
- 5) Cheap due to long life.
- 6) No bait or other material is needed.
- 7) A new trapper can be trained in a week.
- 10 8) If there are no muskrats we can concentrate on clearing  
water and coypu in an environmentally friendly way.
- 9) The tubes do not obstruct the water flow and do not get  
dirty or become clogged.
- 10) No poison or traps needed: more environmentally  
15 friendly and safer.
- 11) This system will enable the muskrat population to be  
reduced to and maintained at an acceptable level within  
a few years.
- 12) No more damage to farm crops and dikes.
- 20 13) Environmental and nature organisations are very happy  
with this system (Nature Help Centre, Opglabbeek,  
Limburg, Belgium).
- 14) Less danger from the disease (leptospirosis) spread by  
rats.
- 25 15) No-one will lose their jobs because of the new system,  
because the system must be maintained.
- 16) It is no longer necessary to look for the rats: they  
enter the nets automatically while on the move.
- 17) The system continues working during staff illness or  
30 holiday.
- 18) The results show yhat the system is highly effective.

The muskrat population can be reduced to and maintained  
at an acceptable level within three years. The system is  
a new application and working method using new and fami-  
35 liar resources. It is effective, economical, environmen-  
tally friendly and selective.

I request protection to:

- 1) catch muskrats using tube nets in any form whatsoever,  
with one or more flaps and/or throats (funnels with or  
40 without flap), used en masse, and all derivatives hereof
- 2) produce or have produced all necessary materials:  
tubes, covers, throats, flaps, etc.

-4-

Effective, economical, selective, safer and environmentally  
method of catching muskrats using plastic tube nets  
\*\*\*\*\*

- Using tube nets placed in large numbers. The ideal size  
is 50 cm long and 25 to 30 cm diameter, manufactured  
from plastic ( (1) fig. 1 ).  
Sealed at the bottom ( (3) fig. 1) and provided at the  
5 top with one or more flaps ((6) fig.2) or throats  
(funnels) ((2) fig.1).  
Fitted with escape openings for small animals ((4) fig.  
1+2 )
- 10 The core of the problem is that there is currently no  
structural and preventive approach, and many unwanted  
creatures are trapped.  
Using tube nets placed permanently in large numbers of  
locations, the muskrats will be trapped while on the  
move, before they have chance to breed, quickly reducing  
15 the population.

Fig.1

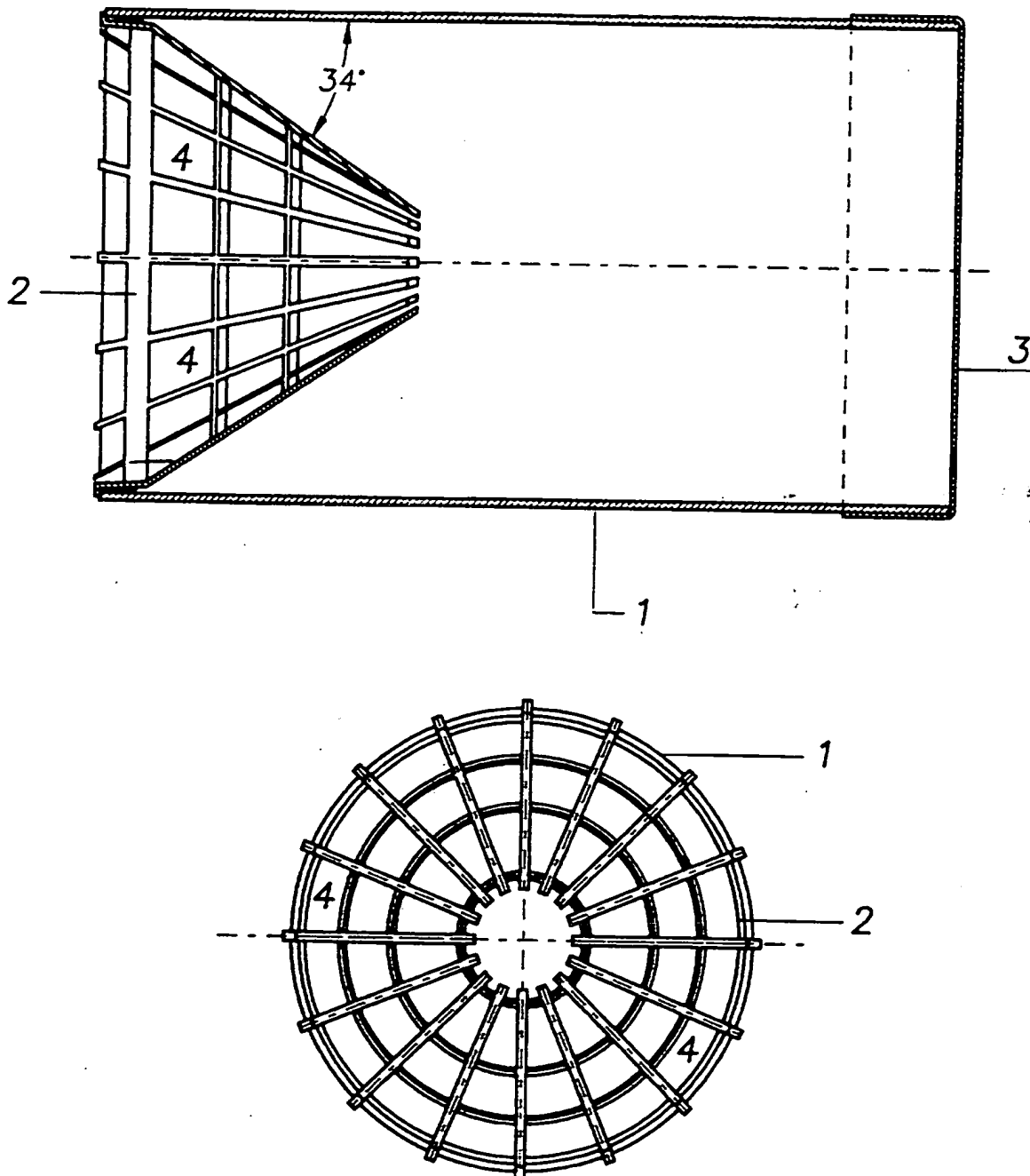
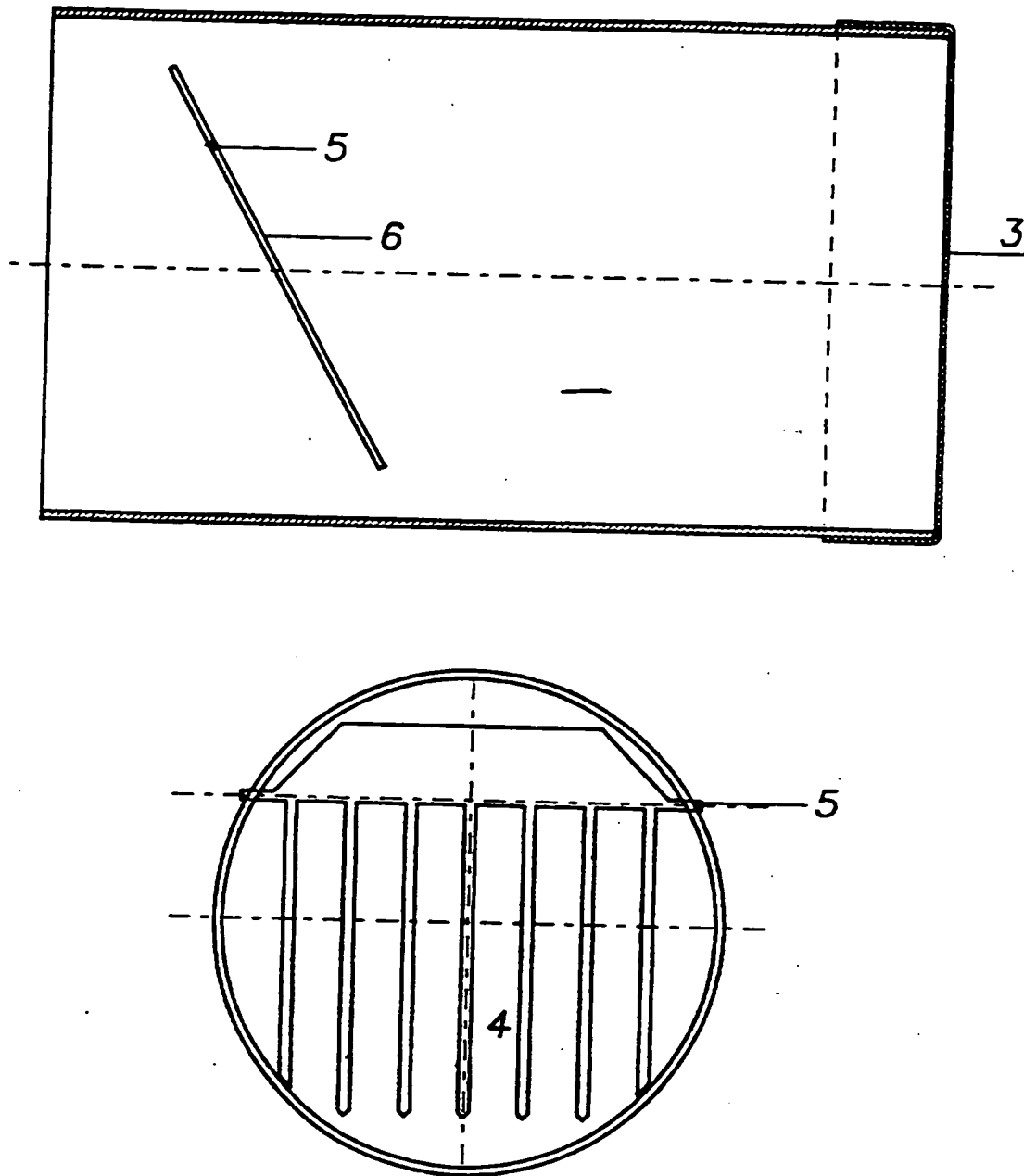


Fig.2





# INTERNATIONAL SEARCH REPORT

Inter: al Application No  
PCT/BE 95/00079

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 6 A01M23/08 A01M23/18

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 6 A01M

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	NL,A,7 607 747 (SCHOLTZEL) 25 January 1977 see the whole document ---	1
A	NL,A,8 902 266 (LOONSTRA) 2 April 1991 see the whole document ---	1
A	AU,B,568 974 (MILLER) 14 January 1988 see the whole document ---	1
A	DE,C,338 760 (LITSCHKE) 9 October 1918 see the whole document -----	1

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

### \* Special categories of cited documents:

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*A\* document member of the same patent family

Date of the actual completion of the international search

14 December 1995

Date of mailing of the international search report

05.01.96

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Pirou, J-C

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/BE 95/00079

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
NL-A-7607747	25-01-77	DE-A- 2532523 BE-A- 844299	10-02-77 16-11-76
NL-A-8902266	02-04-91	NONE	
AU-B-568974	14-01-88	AU-B- 5609486	05-03-87
DE-C-338760		NONE	

**This Page is Inserted by IFW Indexing and Scanning  
Operations and is not part of the Official Record**

**BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ BLACK BORDERS
- ☐ IMAGE CUT OFF AT TOP, BOTTOM OR SIDES
- ☐ FADED TEXT OR DRAWING
- ☐ BLURRED OR ILLEGIBLE TEXT OR DRAWING
- ☐ SKEWED/SLANTED IMAGES
- ☐ COLOR OR BLACK AND WHITE PHOTOGRAPHS
- ☐ GRAY SCALE DOCUMENTS
- ☐ LINES OR MARKS ON ORIGINAL DOCUMENT
- ☒ REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY
- ☐ OTHER: \_\_\_\_\_

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.**